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Remarks

The present response is to the Office Action mailed the above-referenced case on June 14, 2005. Claims 2 and 7 are rejected under 35 U.S.C. 112, second paragraph as being indefinite. Claims 1-7 and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang et al. (U.S. Patent Application Publication No. 2004/0221292), hereinafter Chiang, in view of Britton, (U.S. Patent Application Publication No. 2002/0178170), hereinafter Britton.

Applicant has carefully studied the references provided by the Examiner, and the Examiner's rejections and statements of the instant Office Action. Responding to the Examiner's rejections due to informalities, applicant herein provides appropriate amendment to the claims to overcome the rejections.

In response to the Examiner's merit rejections of applicant's claims, applicant herein amends the language of the base claims to positively recite that the data reconciliation bus and framework utilizes an in-memory entity-relationship (ER) model of each legacy system of the architecture. Applicant's claim 4 is accordingly cancelled. Applicant further provides argument to more particularly point out the Examiner the subject matter of applicant's invention regarded as patentable, which the Examiner appears to misunderstand in his rejections and statements, and which will clearly establish that the claimed invention positively differentiates the invention of the present application over the inventions of the combined art .

Regarding claim 1 the Examiner has stated in his remarks that Chiang teaches applicant's system architecture for adapting at least one legacy system for functional interface with at least one component system comprising all of applicant's claimed limitations, with the exception that Chiang is silent on a data reconciliation bus for data redundancy between legacy systems in the event of more than one legacy system, relying on the reference of Britton for teaching this deficiency (paragraph 0043). Applicant respectfully disagrees with the Examiner's interpretation of the combined art for reading on applicant's claimed limitations.

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Applicant does not believe that the data reconciliation bus as taught in the specification and recited in the claims as amended can be easily derived by combining the concepts described in the teachings of Chiang and Britton, nor does applicant believe that the connectivity bus as described in applicant's specification could be easily conceived by the combined art.

Applicant wishes to direct the Examiner's attention to applicant's specification with reference to figure 1, wherein a block diagram is illustrated representing an architectural overview of an object-oriented system enabling coexistence between legacy systems and state-of-the-art components according to an embodiment of the present invention. A connectivity bus (108) is described as part of system (100), and is adapted to transform object-oriented data in an open format into data formats usable by new components (109 and 110). Likewise, data input from the new components is transformed into object-oriented data in an open format definable at the middleware level of the object façade (105 1-n).

Applicant agrees with the Examiner's statement that the combined art teaches a connectivity bus for extending legacy function to at least one component system. However, applicant argues that the key differentiator in applicant's invention over that of Chiang and Britton is that applicant's connectivity bus employs 'n x m' connectivity, whereas the connectivity bus of Chiang and Britton clearly does not. Applicant refers the Examiner to applicant's specification (beginning page 9, line 24), wherein applicant's connectivity bus framework is expressed in the most basic form represented in syntax. As further described in the specification, applicant's connectivity bus (108) can be any standard middleware. In the above example new component (109) accesses services modeled in facade 105 1. Any of Sk1-Skn may invoke any of legacy services 1-n. The connectivity bus resolves the requests to S11 through S1n has represented in the component wrapper (facade 105 1). Adapter 104 provides the defined set of legacy services in the form of modeled services S11-S1n, enabling the new components to have integrated access to legacy data through an open (public) architecture. The key process identified and facilitated by system 100 is the ability to define a legacy system(s) and all

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of the services invoked externally as an object model by modeling individual legacy
services and then by modeling a defined reference set of those service objects into an
object that completely describes an entire legacy system.

Applicant argues that the most one could achieve in a system according to the
combined prior art is a point-to-point connector based on a common application model
represented in a normalized form suggested by Britton. Applicant urges that the key
differentiator in applicant's connectivity bus is the utilization of 'n x m' connectivity
which uses entity relationship (ER) models to represent unified normalized application
models. Conversely, the reference of Chiang does not use ER modeling in the same
sense.

In applicant's invention the unified normalized layer (301, figure 3) is represented
as an ER model whereas the reference of Britton proposes RDF triplets. Referring to the
specification of Britton, it is explicitly taught, with reference to figure 1, that the
holographic data store (114, figure 1) stores data from the legacy databases (140) and
from the framework server (116) as RDF triplets (paragraph 0037). Any given
transaction (or other event that gives rise to triplets of the type stored in the holographic
data store may be reflected in multiple legacy database systems, and when those systems
are queried by the connectors the result may be multiple triplets causing redundant or
related information to be stored in the holographic data store. The data store includes a
rationalizer that periodically passes through the retained triplets to combine those related
triplets into "bags" (paragraph 0043).

Applicant cannot understand how such connectivity as taught in Britton can read
on applicant's 'n x m' connectivity utilized in the claimed invention. It is applicant's
strong believe after thorough review of the prior art that the combined art therefore
teaches point-to-point connectivity rather than the connectivity as taught in applicant's
specification and claims.

Further, in the Examiner's statements of the instant Office Action, the Examiner
has admitted that the reference of Chiang fails to teach applicant's data reconciliation bus
for data redundancy between legacy systems in the event of more than one legacy system,

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and relies on the reference of Britton for teaching this deficiency. The Examiner has further stated, with regard to applicant's claim 4, that the reference of Chiang fails to teach applicant's reconciliation bus utilizing an in-memory entity-relationship model of each legacy system of the architecture, and relies on the reference of Britton for disclosing this aspect (paragraphs 0043 and 0003-0006). However, as argued above by applicant with reference to the connectivity method utilized by applicant's connectivity bus, the combined art teaches at best only point-to-point connectivity.

In applicant's invention ER modeling is utilized because it is more popular in the art and has well-defined mappings to other popular data representation models. Applicant's independent claims now specifically recite that in-memory ER modeling is utilized in data reconciliation. The Examiner refers to paragraphs 0003-0006 in the reference of Britton supporting the statement. The paragraphs referenced read United States Patent Applications related to the application, referring to Metamodels. Applicant believes that this also does not read on applicant's claimed ER modeling. Metamodels our models that represent a set of related models, whereas ER modeling refers to a diagram that represents entities (something about what information is to be held, such as a row or record a database, and the relationships between them. Applicant does not understand how Metamodeling reads on applicant's claimed ER modeling, and respectfully invites the Examiner to expand on his reasoning for equating the two.
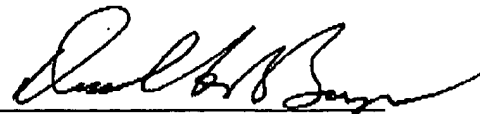
For the reasons outlined above by applicant, and the amendments to the independent claims, applicant believes that independent claims 1 and 13 now clearly and unarguably differentiate over the prior art references presented by the Examiner either singly or in combination. Depending claims 2-7 and 14-17 are then patentable on their own merits, or at least as depended from a patentable claim.

As all of the claims standing for examination have been shown to be patentable as amended and argued over the art of record, applicant respectfully requests reconsideration, that the prior art references be withdrawn, and that the present case be passed quickly to issue. If there are any time extensions needed beyond any extension specifically requested with this response, such extension of time is hereby requested. If

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there are any fees due beyond any fees paid with this amendment, authorization is given to deduct such fees from deposit account 50-0534.

Respectfully Submitted,
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by_____
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